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|--------------------------|------------------------|----------------------|--|
| Interview Summary | Application No. | Applicant(s) | |
| | 09/843,417 | FUKUSHIMA, TETSUHARU | |
| | Examiner | Art Unit | |
| | Dang D Le | 2834 | |

All participants (applicant, applicant's representative, PTO personnel):

- (1) Dang D Le. (3) ____.
- (2) Mr. Treitler. (4) ____.

Date of Interview: 10 December 2002.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: ____.

Claim(s) discussed: 5.

Identification of prior art discussed: Shimizu and Inariba.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The applicant proposed to amend 5 as shown in paper attached. The amendment overcomes the examiner's last rejection. However, the "magnetic interference" needs to be clarified.

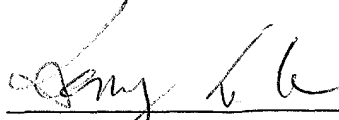
(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☒ It is not necessary for applicant to provide a separate record of the substance of the interview(if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

12/10/02

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

Le, Dang

From: DTreitler@FLHLAW.COM
Sent: Tuesday, December 10, 2002 3:25 PM
To: Dang.Le@USPTO.GOV
Subject: Re: RE: App. No. 09/843,417

Examiner Le, thanks for the interview.

How's this for now?:

"Proposed amendment appears to overcome art of record but requires clarification of terms. Applicant's representative to submit revised proposal shortly."

>>> <Dang.Le@USPTO.GOV> 12/04/02 12:41PM >>>
Mr. Treitler,

Can you make it December 10 at 2 p.m? I have a meeting from 9-12 that day.

Dang Le

-----Original Message-----

From: DTreitler@FLHLAW.COM [mailto:DTreitler@FLHLAW.COM]
Sent: Wednesday, December 04, 2002 12:34 PM
To: dang.le@uspto.gov
Subject: App. No. 09/843,417

Examiner Le:

Per my phone message, thanks for considering our request for a TELEPHONE interview. If granted, attached is a proposal as a starting point for discussion, while we remain open to your further suggestions. If you agree to interview, I propose December 10 at 9 a.m., otherwise please advise as to date/time.

Damon Treitler
Reg. No. 48,377
212-588-0800 x2188

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tetsuharu Fukushima
Serial No. : 09/843,417
Filed : April 26, 2001
For : AC SERVOMOTOR
Examiner : Dang D. Le
Art Unit: 2834

PROPOSED AMENDMENT NOT TO BE ENTERED

5. (New) An AC servo motor comprising:

a stator iron core having a plurality of slots; and

a rotor comprising a plurality of annular polar anisotropic magnets having an equal number of magnetic poles and being disposed to minimize a cogging torque according to the following:

determining a number of torque ripples generated during one rotation of the rotor, said number based on a common multiple of the number of magnetic poles and the number of stator slots;

determining a skew angle θ based on the number of torque ripples;

determining a value X based on (the magnetic interference) between the magnets at the boundary therebetween;

determining a predetermined angle θ' based on the skew angle θ multiplied by said value X;

shifting the magnets so as to skew the corresponding magnetic poles of the magnets by the predetermined angle θ' .

EXAMPLE: (see FIG. 5 and pages 11-12 of specification)

number of magnets = 2

poles per magnet = 8

slots in stator = 12

ripples in one rotation of rotor = Least Common Multiple of 8 and 12 = 24

skew angle θ = (360 degrees divided by # ripples) divided by 2 = (360 / 24) / 2 = 7.5

magnetic interference value = 4/3

predetermined angle θ' = skew angle θ multiplied by interference value = 7.5 x 4/3 = 10 degrees

$$\theta' = \theta \times X \quad ?$$